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20 APR 1964

MEMORANDUM FOR DIRECTOR (S)NRO STAFF

SUBJECT: CORONA Measurement Program

- References:** (a) Report of the Photo Working Panel on the C/M System, dtd 8 Feb 64
- (b) (S)DNRO Memo for Director, (S)NRO Staff, Subject: Report of the Photo Working Panel on the C/M System, dtd 2 Mar 64

The committee appointed to plan a specific program for implementation of reference (a) has submitted their recommendations. One of the recommendations pertains to the laboratory collection of specific data relating to the CORONA System. Orbital data collection will be accomplished only as indicated by the laboratory test data and approved by (S)DNRO.

Attached is a Work Statement giving the objective, responsibility and tasks. I desire that a plan be prepared to include schedule and costs for submission to me as soon as practicable.

SIGNED:

Brockway McMillan
Director
(S)National Reconnaissance Office

**Attachment
Work Statement**

cc: Dr. Wheelon

NRO review(s) completed.

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RECEIVED
CORONA
27 APR 1964

WORK STATEMENT
C_M MEASUREMENT PROGRAM

OBJECTIVE

1. Isolation of the probable contributors to the performance spread.
2. Design the flight experiments, when necessary and as approved, to validate the results of laboratory tests.
3. Reduce and analyze data from flight experiments.
4. Recommend modifications, as appropriate and as substantiated by laboratory and/or flight experiments.

RESPONSIBILITY

Director (S)NRO Staff is responsible for establishing and directing a C_M measurement program with necessary coordination with project office, procurement officer, and associate contractors.

TASKS

1. Light Leaks - Measurements necessary by ITEK to determine general light leaks, veiling glare, and correlation with actual material.
2. Focus - ITEK to determine sensitivity of Titanium/Invar and four roller scan head configuration.
3. Soft Spots - ITEK to conduct a series of Dr. A tests over the range of temperatures and gradients experienced in flight. LMSC to determine deformations resulting from camera mounting procedures and Dr. A tests just prior to shipping to base for launch.
4. Thermal - ITEK and LMSC complete the analytical models of camera and complete system and verify by flight experience. ITEK to make a lens only and complete camera test at realistic temperature levels and gradients.

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5. **Exposure Criteria** - ITEK with direct support of EK (by contract, if necessary), to analyse the exposure/processing criteria and application for CORONA. Review to include the four seasons of the year and desirability of variable exposure. Very careful monitoring is required to keep within reasonable bounds and funding.

6. **Vibration** - ITEK is to determine sensitivity and extent of the camera/film to vibration including film vibration induced during exposure by passage of rollers.

7. **Filter** - The stereo interpretation should be enhanced by using Wr 25 on one camera and Wr 21 on the other camera with appropriate exposure settings in the CORONA system, therefore such an experiment is to be flown as soon as practicable.